

FIG. 1

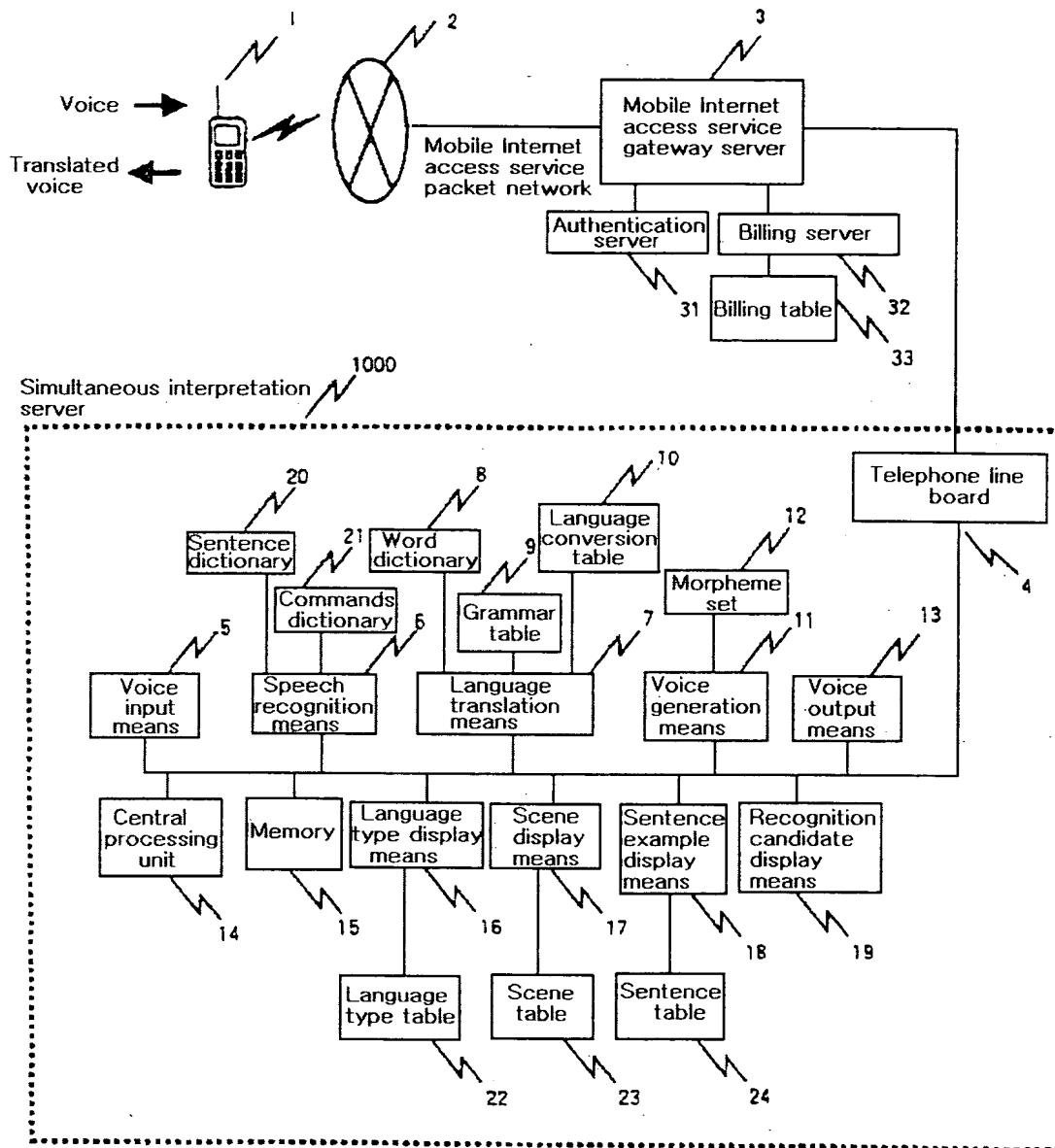
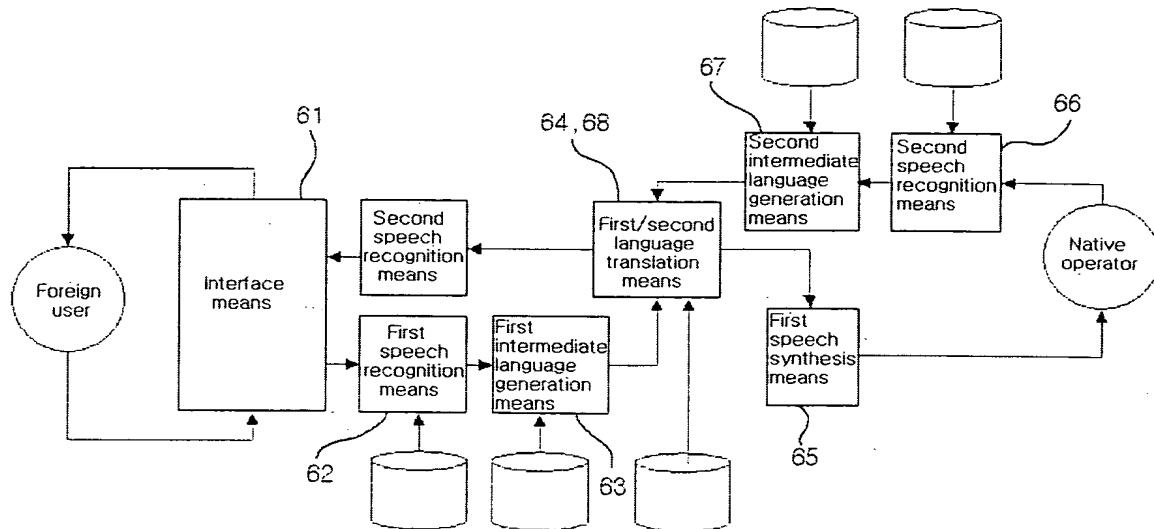


FIG. 2



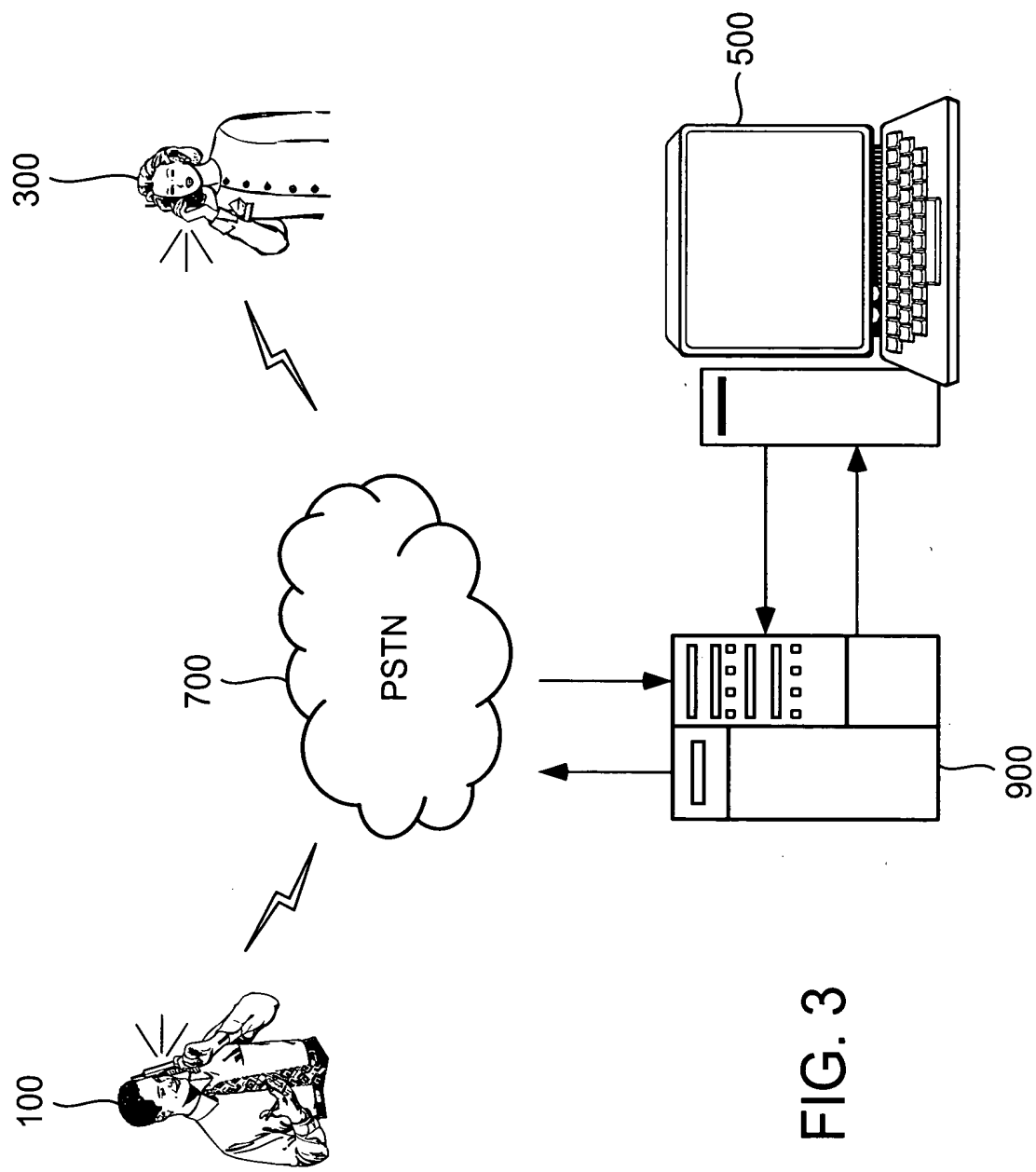


FIG. 3

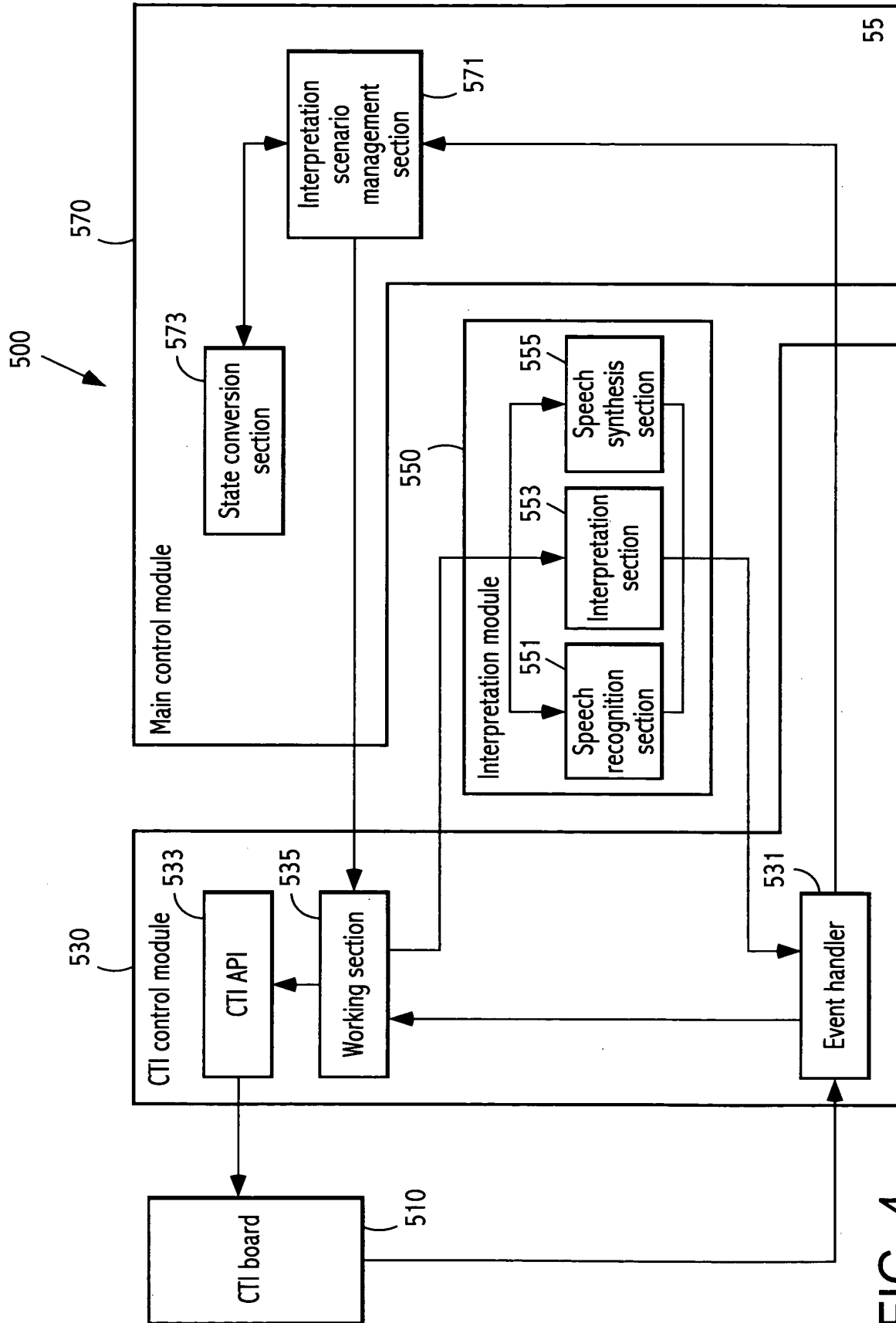


FIG. 4

FIG. 5

Phone dialing (JB_SendCall)	Phone answering (JB_WaitCall)	Phone disconnection (JB_Disconnect)	Button pressing (JB_PlayTone)	Button reading (JB_GetDigit)	Tone detection (JB_WaitTone)	Sound emitting (JB_PlayVoice)	Sound hearing (JB_RecordVoice)	Speaking (JB_PlayTTS)	Listening (RecogSpeech)
dx_clrcap	dx_sethook	dx_stopch	dx_blddt	dx_clrdigbuf	dx_deltone	dx_stopch	dx_stopch	dx_stopch	dx_stopch
dx_dial	delay TDX_CST	delay ATDX_STATE	dx_addtone	dx_getdig	dx_blddt	delay ATDX_STATE	delay ATDX_STATE	delay ATDX_STATE	delay ATDX_STATE
delay TDX_CALLP		dx_sethook	dx_playtone	delay TDX_GETDIG	dx_addtone	dx_fileopen	dx_fileopen	Speech synthesis	dx_setdevuio
ATDX_CONTYPE		delay TDX_CST	delay TDX_PLAYTONE		delay TDX_CST	dx_play	dx_rec	dx_play	dx_rec
ATDX_CPTERM						delay TDX_PLAY	delay TDX_RECORD	delay TDX_PLAY	delay TDX_RECORD
						dx_fileclose	dx_fileclose		Speech recognition

FIG. 6

Current state	Event	Action	Remarks	
ST_START	EVT_WAITCALL	OnGotoPlayWelcomeMent	Start - Phone answering (①)	Phone connection step
	EVT_ERROR	EVT_ERROR		
ST_PLAYWELCOMEMENT	EVT_PLAYVOICE	OnEndPlayWelcomeMent		
	EVT_DISCONNECT	OnGotoStart	Output of welcome message (②)	
	EVT_ERROR	OnGotoReset		
ST_PLAYPHONENUMMENT	EVT_PLAYVOICE	OnEndPlayPhoneNumMent		
	EVT_DISCONNECT	OnGotoStart	Output of message for phone number input (③)	
	EVT_ERROR	OnGotoReset		
ST_GETPHONENUMDIGIT	EVT_GETDIGIT	OnEndGetPhoneNumDigit		
	EVT_DISCONNECT	OnGotoStart	DTMF tone detection (④)	
	EVT_ERROR	OnGotoReset		
ST_PLAYOUTBOUNDCALLMENT	EVT_PLAYVOICE	OnEndPlayOutboundCallMent		Automatic interpretation step
	EVT_DISCONNECT	OnGotoStart	Output of call connection announcement (⑤)	
	EVT_ERROR	OnGotoReset		
ST_PLAYCONNECTFAILUREMENT	EVT_PLAYVOICE	OnEndPlayConnectFailMent		
	EVT_DISCONNECT	OnGotoStart	Output of call connection fail message (⑥)	
	EVT_ERROR	OnGotoReset		
ST_PLAYCONNECTSUCCESSMENT	EVT_PLAYVOICE	OnEndPlayConnectSuccessMent		
	EVT_DISCONNECT	OnGotoStart	Output of call connection success message (⑦)	
	EVT_ERROR	OnGotoReset		
ST_PLAYINTRODUCTIONMENT	EVT_PLAYVOICE	OnEndPlayIntroduceMent		
	EVT_DISCONNECT	OnGotoStart	Output of use announcement (⑧)	
	EVT_ERROR	OnGotoReset		
ST_GETRECOGSTARTDIGIT	EVT_PLAYVOICE	OnEndGetRecogStartDigit		Automatic interpretation step
	EVT_DISCONNECT	OnGotoStart	Start of voice recording --> select '*' button (⑨)	
	EVT_ERROR	OnGotoReset		
ST_GETRECOGSTOPDIGIT	EVT_PLAYVOICE	OnEndGetRecogStopDigit		
	EVT_DISCONNECT	OnGotoStart	Termination of voice recording --> select '#' button (⑩)	
	EVT_ERROR	OnGotoReset		
ST_SPEECHRECOG	EVT_RECOGSPEECH	OnEndSpeechRecog		
	EVT_DISCONNECT	OnGotoStart	Speech recognition (⑪)	
	EVT_ERROR	OnGotoReset		
ST_PLAYRECOGFAILUREMENT	EVT_PLAYVOICE	OnEndPlayRecogFailMent		
	EVT_DISCONNECT	OnGotoStart	Output of speech recognition fail message (⑫)	
	EVT_ERROR	OnGotoReset		
ST_PLAYTTSRECOGSENTENCE	EVT_PLAYVOICE	OnEndPlayTtsRecogSentence		Interpretation Transmission step
	EVT_DISCONNECT	OnGotoStart	Recognized sentence to speech synthesis (⑬)	
	EVT_ERROR	OnGotoReset		
ST_TRANSRECOGSENTENCE	EVT_TRANS	OnEndTransRecogSentence		
	EVT_DISCONNECT	OnGotoStart	Translation of recognized sentence (⑭)	
	EVT_ERROR	OnGotoReset		
ST_PLAYTTSTRANSSENTENCE	EVT_PLAYVOICE	OnEndPlayTtsTransSentence		
	EVT_DISCONNECT	OnGotoStart	Translated sentence to speech synthesis (⑮)	
	EVT_ERROR	OnGotoReset		
ST_OUTTRANSSENTENCE	EVT_PLAYVOICE	OnEndOutTransSentence		
	EVT_DISCONNECT	OnGotoStart	Output of translated sentence (⑯)	
	EVT_ERROR	OnGotoReset		
ST_PLAYRCVWAITMENT	EVT_RCVSENTENCE	OnEndGetRcvSentence		Interpretation Transmission step
	EVT_NOTRCV	OnGotoPlayIntroduceMent	Receipt of answer sentence (⑰)	
	EVT_ERROR	OnGotoReset		
ST_OUTRCVSENTENCE	EVT_PLAYVOICE	OnEndOutRcvSentence		
	EVT_DISCONNECT	OnGotoStart	Output of answer sentence (⑱)	
	EVT_ERROR	OnGotoReset		
ST_PLAYDINGDONGMENT	EVT_PLAYVOICE	OnEndPlayDingdongMent		
	EVT_DISCONNECT	OnGotoStart	End of sentence output	
	EVT_ERROR	OnGotoReset		
ST_ERROR	EVT_DISCONNECT	OnGotoStart		
	EVT_PLAYVOICE	OnGotoReset	Error processing	
	EVT_ERROR	OnGotoReset		

FIG. 7

